

Helix BioPharma Corp. and Moffitt Cancer Centre to Present at World Molecular Imaging Congress

Pharmacodynamics of targeted urease and checkpoint blockade using Chemical Exchange Saturation Transfer and 31P-magnetic Resonance Spectroscopy

RICHMOND HILL, Ontario, Sept. 03, 2019 -- Helix BioPharma Corp. (TSX: HBP), ("Helix" or the "Company"), an immuno-oncology company developing innovative drug candidates for the prevention and treatment of cancer, is pleased to announce that they, together with Moffitt Cancer Center ("Moffitt"), will be presenting a poster entitled "Pharmacodynamics of targeted urease and checkpoint blockade using Chemical Exchange Saturation Transfer ("CEST") and 31P-magnetic resonance spectroscopy ("31P-MRS)." The question asked, "Is there a role for hyperpolarized ^{13}C and ^{15}N ?"

The poster presentation will take place at the World Molecular Imaging Congress ("WMIC"), which is taking place at the Palais des congrès de Montréal in Montréal, Quebec, Canada (<http://www.wmis.org/2019-wmic/>) on September 4th through the 7th, 2019.

The presentation describes the use of functional imaging techniques to measure the effect of L-DOS47 on changing tumor pH in a pancreatic mouse model. The pH effect can be measured by CEST MRI using a CT contrast agent iopamidol and by 31P-MRS with 3-aminopropyl phosphate ("3-APP") as reporting agent. In both cases, L-DOS47 injection is shown to induce a localized pH increase at the target tumor. L-DOS47 pH effect may also have a direct impact on therapy as combined treatment of L-DOS47 with an anti-PD-1 antibody is more efficacious than either agent alone in a preliminary round of animal study.

In a separate experiment, high resolution magnetic resonance spectroscopy of hyperpolarized ^{13}C and ^{15}N urea was able to show how urease (L-DOS47 enzymatic active component) breaks down urea directly and induces the pH effect. Both CEST and hyperpolarization are functional imaging techniques being studied in clinics to monitor therapeutic purposes. Helix is exploring the potential application of these techniques to its L-DOS47 clinical development program.

"I would like to thank and congratulate Dr. Robert (Bob) Gillies and the Moffitt team," said Dr. Heman Chao, Helix's Chief Executive Officer. "This work complements data that was presented at the recent American Association for Cancer Research Annual Meeting 2019, in Atlanta, where the Company presented a poster presentation on "Improving survival in pancreatic cancer using Doxorubicin in combination with L-DOS47". We look forward to continuing collaboration with Bob and the team."

On August 7, 2019 the Company announced that it had received approval from the U.S. Food and Drug Administration to initiate a Phase Ib/II study of L-DOS47 and doxorubicin in advanced metastatic pancreatic cancer.

About Helix BioPharma Corp.

Helix BioPharma Corp. is an immuno-oncology company specializing in the field of cancer therapy. The company is actively developing innovative products for the prevention and treatment of cancer based on its proprietary technologies. Helix's product development initiatives include its novel L-DOS47 new drug candidate and Chimeric Antigen Receptor ("CAR") based cell therapies. Helix is currently listed on the TSX under the symbol "HBP".

About L-DOS47

L-DOS47 is Helix's first immunoconjugate based drug candidate in development based on the Company's novel DOS47 platform technology, which is designed to use an innovative approach to modify the microenvironmental conditions of cancer cells in a manner that leads to their destruction.

Investor Relations

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This news release may contain forward-looking statements with respect to Helix, its operations, strategy, financial performance and condition, including its activities relating to its drug development program, any anticipated timelines for the commencement or completion of certain activities such as raising sufficient capital, merger and acquisition activity, listing on a U.S. exchange and other information in future periods. These statements generally can be identified by use of forward-looking words such as "ambitions", "potentially breakthrough", "should", "may", "will", "expect", "estimate", "anticipate", "intends", "believe" or "continue" or the negative thereof or similar variations. The actual results and performance of discussed herein could differ materially from those expressed or implied by such statements. Such statements are qualified in their entirety by the inherent risks and uncertainties surrounding future expectations, including: (i) Helix's ability to operate as a

going concern being dependent mainly on securing sufficient additional financing in order to fund its ongoing research and development and other operating activities; (ii) the generally inherent uncertainty involved in scientific research and drug development and those specific to Helix's pre-clinical and clinical development programs (DOS47, L-DOS47, V-DOS47 and CAR-T); (iii) that any transactions contemplated herein are completed; and (iv) those risks and uncertainties affecting Helix as more fully described in Helix's most recent Annual Information Form, which is available at www.sedar.com (together, the "Helix Risk Factors"). Certain material factors and assumptions are applied in making the forward-looking statements, including, without limitation, that sufficient financing will be obtained in a timely manner to allow Helix to continue operations and implement its clinical trials in the manner and on the timelines anticipated and that the Helix Risk Factors will not cause Helix's actual results or events to differ materially from the forward-looking statements. These cautionary statements qualify all such forward-looking statements.

Forward-looking statements and information are based on the beliefs, assumptions, opinions, plans and expectations of Helix's management on the date of this news release, and the Company does not assume any obligation to update any forward-looking statement or information should those beliefs, assumptions, opinions, plans or expectations, or other circumstances change, except as required by law.